

GREATER NEW HAVEN WPCA

INTRODUCTION

Sid Holbrook
Executive Director

Gabe Varca
Director of Finance and Administration

Gary Zrelak
Director of Operations

Tom Sgroi, P.E.
Director of Engineering

Bruce Kirkland, P.E.
Senior Engineer

Rick Hurlburt
Superintendent

John Torre
Plant Manager, OMI

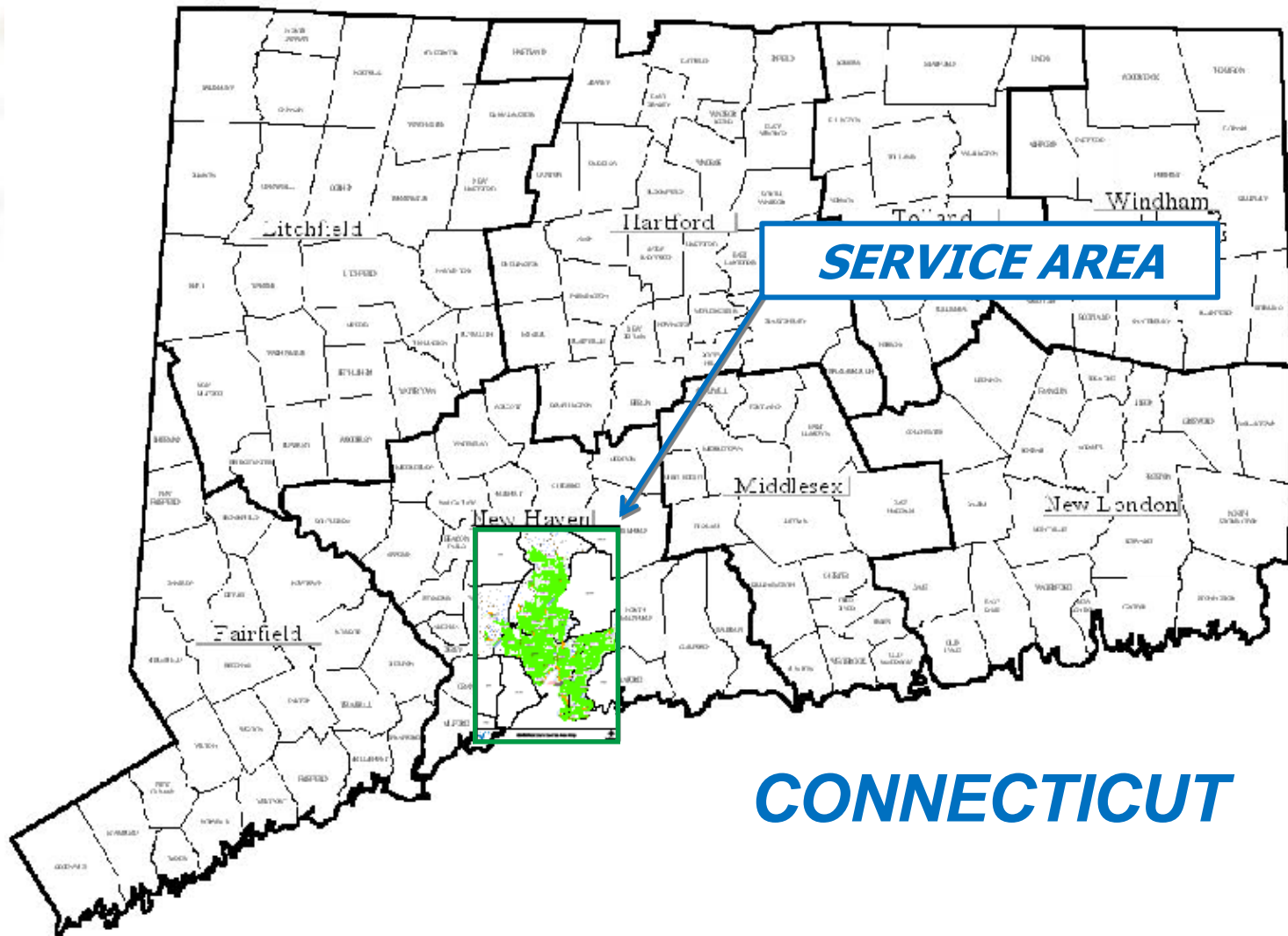
Anthony Fiorillo
Collections Manager, OMI

Larry Smith, PE
New Haven City Engineer






GNHWPCA SEWER SERVICE AREA





MANAGEMENT AND STAFF



EXECUTIVE DIRECTOR – SIDNEY J. HOLBROOK
DIRECTOR OF FINANCE AND ADMINISTRATION – GABRIEL VARCA
DIRECTOR OF OPERATIONS – GARY ZRELAK
DIRECTOR OF ENGINEERING – THOMAS V. SGROI, P.E.
(STAFF OF 37 FULL AND PART-TIME EMPLOYEES)



**GOVERNED BY 9 MUNICIPALLY ELECTED
DIRECTORS**

GNHWPCA BOARD OF DIRECTORS

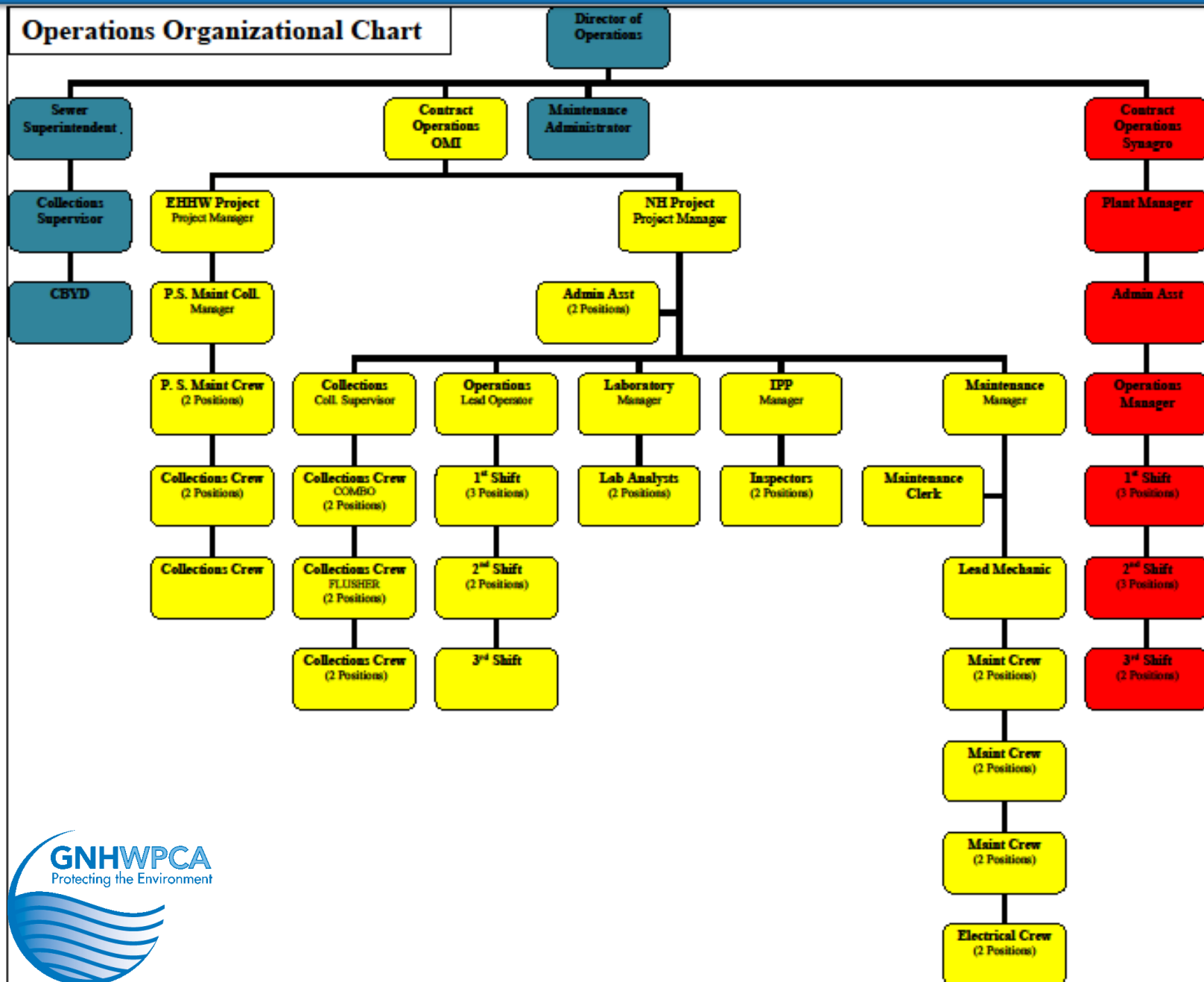
**4 NEW HAVEN
2 HAMDEN
2 EAST HAVEN
1 WOODBRIDGE**



CONTRACT OPERATORS

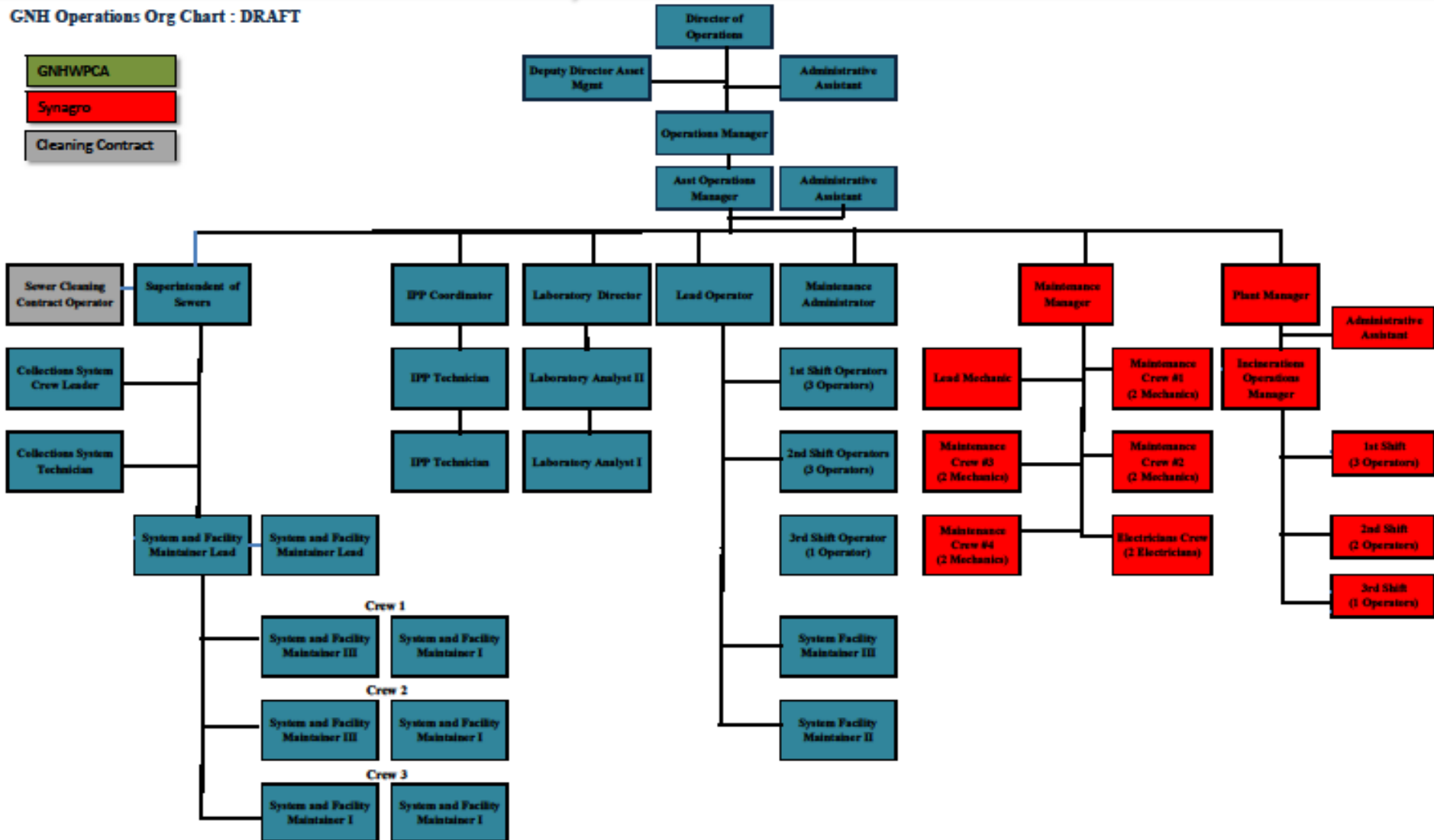
OPERATIONS MANAGEMENT INTERNATIONAL (29 EMPLOYEES)
SYNAGRO – 11 EMPLOYEES

GNHWPCA CURRENT OPERATIONS ORG CHART



GNHWPCA JAN. 1, 2014 OPERATIONS ORG CHART

GNH Operations Org Chart : DRAFT



GNHWPCA WATER POLLUTION ABATEMENT FACILITY



EAST SHORE TREATMENT PLANT

- 29 MGD - AVERAGE
- 40 MGD - SECONDARY DESIGN FLOW

WET WEATHER OPERATIONS

- 100 MGD - WET WEATHER PRIMARY
- SOPs – EPA RESPONSE (GNH0204)

PLANT UPGRADE PROJECT

- 100 MGD TO 187 MGD (Phase I)
- NEW ELECTRICAL BACKBONE
- BACKUP GENERATORS
- SLUDGE STORAGE AND THICKENING
- ENHANCED NITROGEN REDUCTION
- NEW ODOR CONTROL SYSTEM

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

REGIONAL AUTHORITY CREATED IN 2005
FOUR MEMBER COMMUNITIES

HAMDEN
EAST HAVEN
WOODBIDGE
NEW HAVEN

560 MILES OF COLLECTIONS SYSTEMS

70 MILES (12.5%) COMBINED SEWERS

18 PERMITTED CSOs DISCHARGE TO:

- NEW HAVEN HARBOR
- QUINNIPIAC RIVER
- MILL RIVER
- WEST RIVER

30 PUMP STATIONS

8 SIPHONS / PRESSURE SEWERS

HAMDEN
49,510

WOODBIDGE
990

NEW HAVEN
123,630

EAST HAVEN
25,650

POPULATION SERVED
199,780

Legend

GNHWPCA Sanitary Sewer Area
*Existing Preserved Open Space

GNHWPCA Sanitary Sewer Area is the developed
sanitary sewerage system that is
operational and under construction. It is
not intended to show the location of
sanitary sewerage lines that are not
operational and under construction.



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

REGIONAL AUTHORITY CREATED IN 2005
FOUR MEMBER COMMUNITIES

HAMDEN
EAST HAVEN
WOODBIDGE
NEW HAVEN

WE DON'T OWN, MAINTAIN AND/OR HAVE
ANY RESPONSIBILITY FOR

- ***Private laterals***
- ***Storm drainage, Roadway, Catch Basins***
- ***Park Lands or public spaces***
- ***School or Government Properties***
- ***City Right of Ways***

HAMDEN
49,510

WOODBIDGE
990

NEW HAVEN
123,630

EAST HAVEN
25,650

POPULATION SERVED
199,780

Legend

GNHWPCA Sanitary Sewer Area
*Existing Preserved Open Space



GNHWPCA MAJOR FACILITIES



GNHWPCA Sewer System

1 inch = 800 feet



4/19/2011

CSO'S AND REGULATORS STATUS



- 💧 **18 PERMITTED CSOs**
 - **14 ACTIVE**
 - **4 CLOSED**
- **24 CSO REGULATORS**
 - **19 ACTIVE**
 - **5 CLOSED**

CSO OUTFALL
REGULATOR
PUMP STATION

NEW HAVEN

Boulevard - Upper
Humphrey
Union
East Street
Fair Haven
Quinpiac - Lower
Tuttle Brook - Lower
Boulevard - Lower

I-95
I-91

East Shore Water Pollution Abatement Facility

HWPCA
ing the Environment



GNHWPCA CSO FLOW MONITORING PROGRAM

- INITIATED JUNE 2012
- 32 FLOW METERS IN SERVICE
- TYPICAL YEAR ESTIMATES
 - 300 CSO events
 - 150 MG of CSO volume



Wireless Water Infrastructure Monitoring

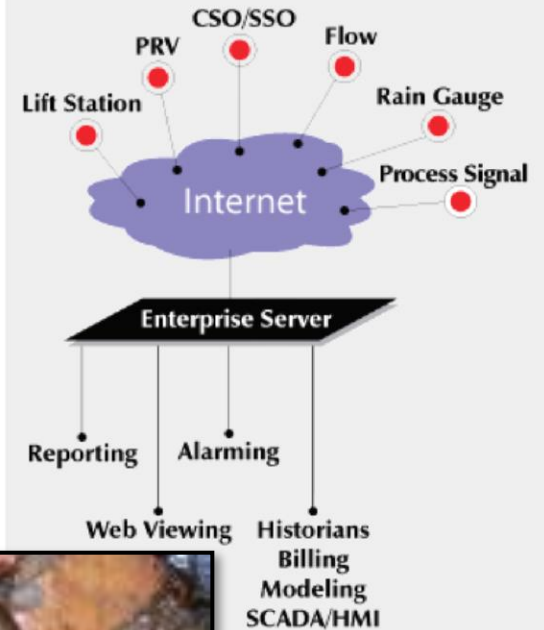
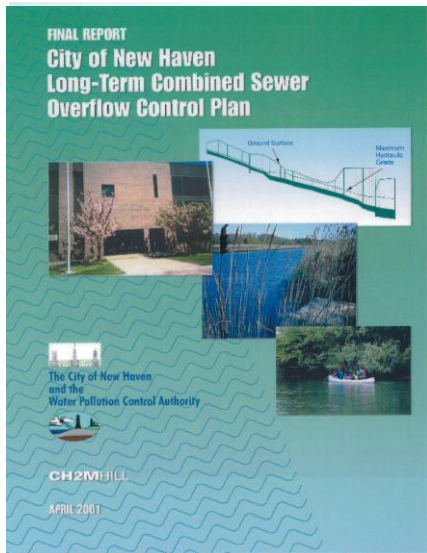


PHOTO COURTESY OF CLS SERVICES, INC.

CITY OF NEW HAVEN LTCP INHERITED BY THE GNHWPCA




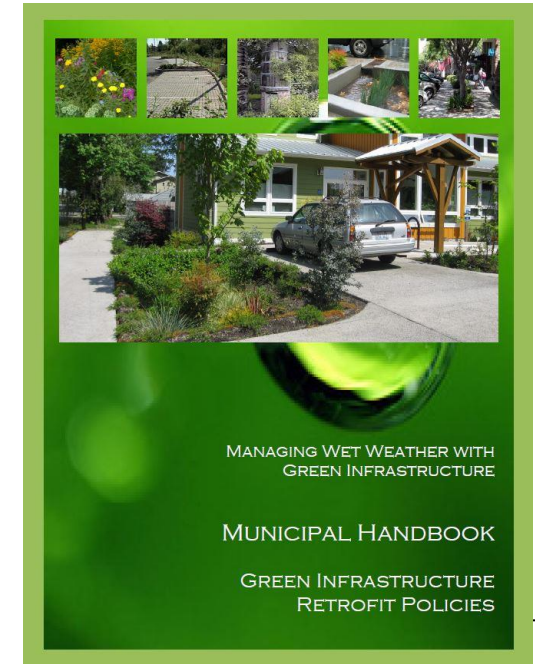
- 💧 **Approved CSO Long Term Control Plan - 2001**
 - Eliminate Sewer Back-ups
 - Reduce Flooding
 - Eliminate CSOs – 2yr Design Storm
- 💧 **2005 Regionalization**
- 💧 **2008 WPAF Objectives**
 - Updated Facility Plan Maximizes Flow to the WPAF
 - Reduce CSOs in a Cost Effective Manner
 - Convey and Treat a 2-year Design Storm (2.05”/6-hours)
 - Improve Collection System
- 💧 **2009 DEEP Consent Order**
- 💧 **2011 Facility Plan Approved**



NEW DRIVERS FOR*2008 FACILITIES PLAN

(*CT DEEP APPROVED 2011)

- ✧ LTCP LOOKED TO AN INFRASTRUCTURE INTENSIVE APPROACH TO CSO PLANNING
- ✧ \$580M+ PROGRAM PROMPTED PROACTIVE RETHINKING OF THE CSO APPROACH
- ✧ SUSTAINABLE SOLUTIONS ARE EXPECTED BY BOTH THE PUBLIC AND THE REGULATORS 
- ✧ **DEVELOPED STRATEGY TO MEET CSO GOALS**



Managing Wet Weather with Green Infrastructure
Municipal Handbook

Green Infrastructure Retrofit Policies

prepared by
Jennifer Bitting
Christopher Kloss
Low Impact Development Center

The Municipal Handbook is a series of documents
to help local officials implement green infrastructure in their communities.

December 2008



EPA-833-F-08-008

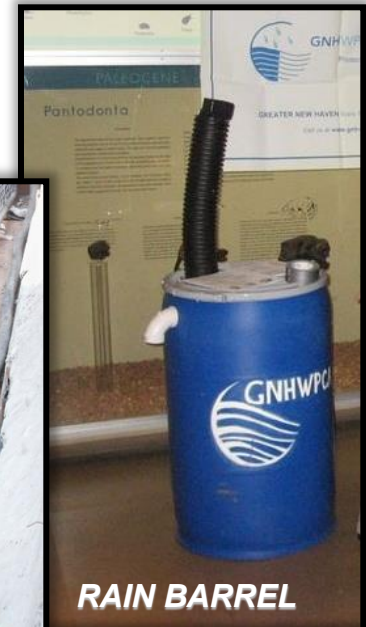


Front Cover Photos
Top: rain garden; permeable pavers; rain barrel;
planter; tree boxes.
Large photo: bio-retention and permeable
concrete, Olympia WA




THREE-FOLD STRATEGY TO MEET GOAL OF REDUCING CSOs

- 💧 **Reduce stormwater**
- 💧 **Improve the collection system**
- 💧 **Maximize treatment capacity at the plant**

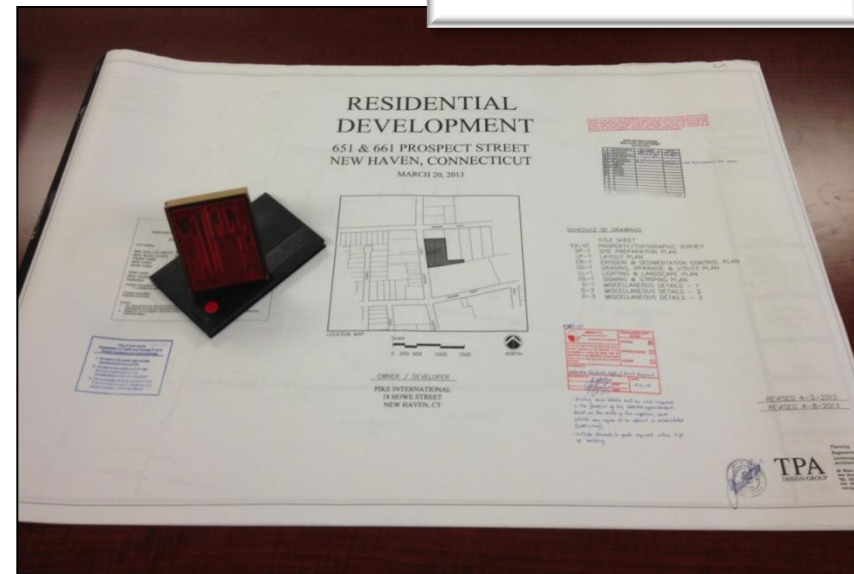
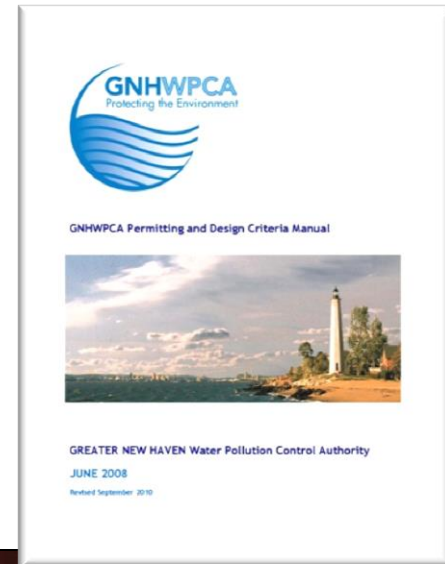



REGIONALIZATION = IMPROVED MANAGEMENT OF COLLECTION SYSTEM



REGIONALIZATION QUICKLY PUTS OBJECTIVES IN ORDER AND ALLOWS FOR EFFECTIVE MANAGEMENT OF COLLECTION SYSTEM

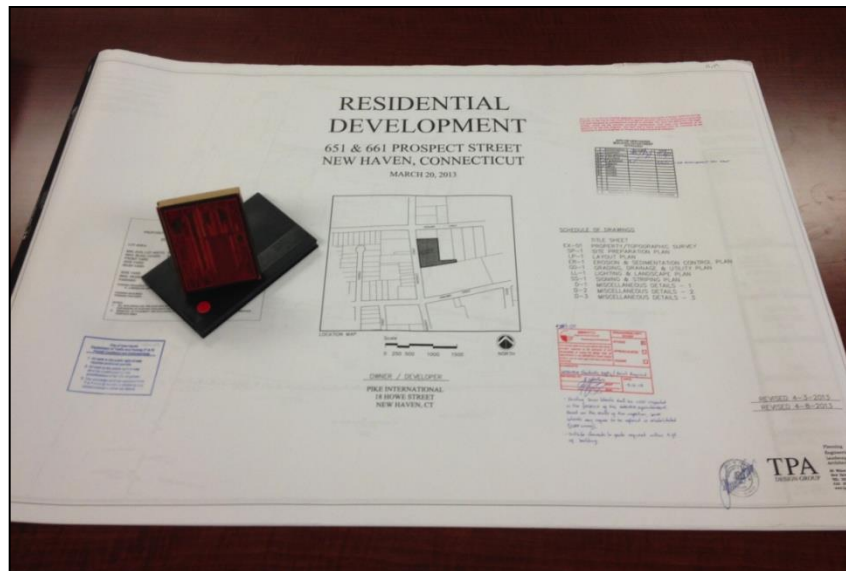
- 1. ESTABLISHED CONNECTION FEES**
- 2. CMOM AND PREVENTATIVE MAINTENANCE PLAN**
- 3. IMPROVED GIS SYSTEM – BUDGET MAINTENANCE**
- 4. 2008 PUBLISH DESIGN CRITERIA MANUAL**
- 5. IMPROVED INSPECTIONS**
- 6. INFLOW REDUCTION MAXIMIZING USE OF THE CT DEEP CWF LOAN PROGRAM**





2008 - GNHWPCA ESTABLISHES FORMAL DESIGN GUIDELINES MANUAL

The Permitting and Design Criterion Manual provides requirements and guidance to Engineers, Developers and Contractors connecting to the Authority's collection system.



GNHWPCA Permitting and Design Criteria Manual



GREATER NEW HAVEN Water Pollution Control Authority

JUNE 2008

Revised September 2010

PLAN REVIEWS – TRACKING OF PROJECTS UTILIZING CMMS WORK ORDER SYSTEM

Maintenance Connection - MRO Work Center 6.0 - GNH13 - Windows Internet Explorer

File View Actions Tools Applications Help Engineering Log off

New Open Explore Reports Dashboard Home Back Work Center Help

Work Order Explorer

WorkOrders Search

All Open

WO #	Reason
ENG-51051	2007-092 71 JONES RD.
ENG-48074	2008-062 ARDEN HOUS
ENG-63858	2013-111 71 - 73 Essex
ENG-56027	2012-138 331 Blake Cir.
ENG-63261	2013-098 SCIENCE PAR
ENG-63197	2013-093 116-18 GREEN
ENG-65181	2013-132 651 - 661 P...
ENG-63335	2013-099 196 COLLEGE
ENG-53297	2012-059 102 WASHING
ENG-58351	2012-199 225 E GRAND
ENG-62467	2013-074 15 HAMPTON
ENG-58844	2009-105 1 LINCOLN S.
ENG-57763	2012-185 GRANNIS ST.
ENG-56970	2012-172 285 PROSPEC
ENG-59901	2013-012 2 MINOR RD (
ENG-51407	2012-004 ROCKVIEW ...
ENG-59481	2013-003 50 WILLIAM S
ENG-63201	2013-094 1125 SHEPAR
ENG-61965	2013-060 161 ELLA T...
ENG-56425	2012-156 141 VALLEY
ENG-63925	2013-113 1717 DIXWEL
ENG-63958	2013-114 180 MAIN STR
ENG-63017	2013-086 111 OVERLO
ENG-54905	2012-101 2276 WHIT...
ENG-64261	2013-123 6 CORPORAT
ENG-64205	2013-121 30 OREGON...
ENG-64206	2013-122 26 MAIN ST...
ENG-64192	2013-120 458 ORANGE
ENG-64182	2013-119 2885 STATE...
ENG-58748	2012-208 159 Valley St.
ENG-58747	2012-207 155 Valley St.
ENG-60459	2013-021 275 WINCHES
ENG-57841	2012-190 TWEED NEW P
ENG-63847	2013-001 NUNDSM0040
ENG-60492	2013-022 533 STRONG.
ENG-55043	2012-105 18 TOWER LN
ENG-62864	2013-084 344 WINCHE...
ENG-61236	2013-045 2695 STATE...
ENG-63424	2013-100 790 MIX AV...
ENG-48090	2011-097 246 - 252 Exc
ENG-57229	2012-179 2100 DIXWEL
ENG-57153	2012-177 55 WEST WOK
ENG-63972	2013-115 524 N HIGH ...
ENG-65179	2012-185 GRANNIS ST.
ENG-56959	2012-171 STRONG ST.

Work Order #ENG-56027

Details Tasks Costs Attach History Assign Group GIS Report

Request Info

2012-138 331 Blake Circle Hamden

Problem: REVIEW
GNHWPCA Plan Review

Requester ID: RHURLBURT

Name: Hurlburt, Rick

Phone: (203) 466-5263

Email: rhurlburt@gnhwpca.coi

Asset / Location: Hamden

Details

Procedure: REV-ENG
Plan Review By Engineering

Target Date: 7/2/2014

Target Hours: 1

Type: DESIGN
Design Services

Category: DEV

Account:

Priority: 3
Normal

Project:

Repair Center: ENG

Shop: ENG PLAN REV

Shift:

Department:

Customer:

Taken By: RHURLBURT

Status

Requested 8/8/2012 12:31 PM

Issued

Sub-Status:

Approval

(Not Required)

Assignments

Click to Assign...

New Assignment

Supervisor: RHURLBURT

Indicators

☐ Warranty ☐ Shutdown Required

☐ Attachments ☐ Lockout/Tagout

☐ Chargeable ☐ Follow-up Work

☐ Survey ☒ Printed / E-Mailed

Page 1 / Page 2 / User-Defined

Complete / Close Cancel Delete History Print

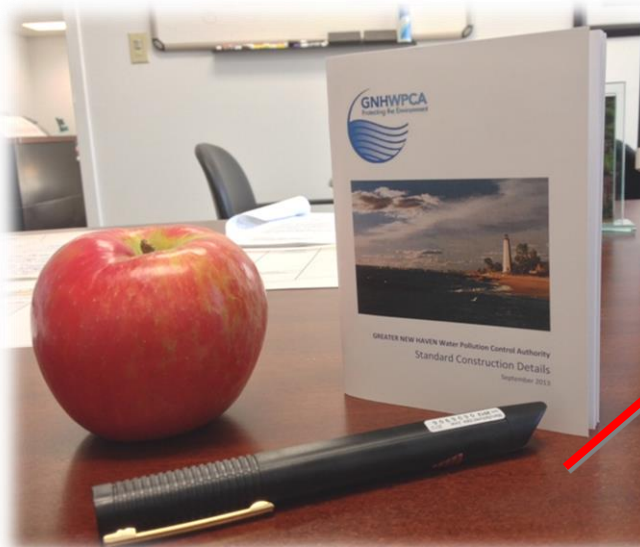
MONITOR CBYD LIST TO MARKOUT AND PREVENT ILLICIT CONNECTIONS



**Know what's below.
Call before you dig.
Dial 811.**

- ☐ **HAMMER TAPS**
- ☐ **REVERSE PITCH**
- ☐ **MISSING BACKFLOW PREVENTERS**
- ☐ **MISSING CLEANOUTS**
- ☐ **FERNCO'S FOR ELBOWS**
- ☐ **NO BEDDING**

ENSURE PERMITS ARE PULLED & CONSTRUCTION DETAILS ARE FOLLOWED



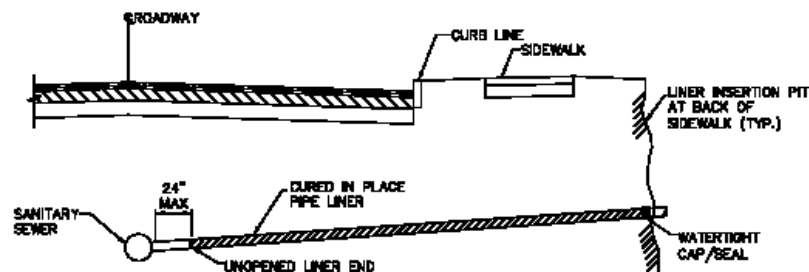
TRENCHLESS ABANDONMENT OF LATERALS AT THE HUB CONNECTION



PERMA-LINER SOCK



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY CONSTRUCTION DETAILS



NOTES:


1. INSERT LINER BEGINNING AT INSERTION PIT OR CLEANOUT, AND ENDING 24" FROM SANITARY SEWER MAIN OR CLEANOUT. LINER END SHALL REMAIN UNOPENED TO PROVIDE A WATERTIGHT SEAL.
2. SEAL LINER AT INSERTION END WITH MALE ADAPTER AND CAP OR AS APPROVED BY THE GWHPCA IN THE FIELD.
3. BACKFILL AS REQUIRED.

REVISIONS	
NO.	DATE
1	JUNE 2008

PLUGGING SEWER LATERALS – TRENCHLESS METHOD

NTS

SD612-21



2008 - GNHWPCA ESTABLISHES FORMAL DESIGN GUIDELINES MANUAL

Guidelines put emphasis on the elimination or reduction of stormwater into the Authority's combined sewer system.

- Separate wherever possible, make developers build infrastructure if a separated system is within reasonable distance to the site.
- **Require the developer to install infiltration systems and/or facilities to detain the 2-year 6-hour post development peak flow rate.**

**GREEN
REDEVELOPMENT
BEGINS TO
BENEFIT CSOs!**

GNHWPCA Permitting and Design Criteria Manual



GREATER NEW HAVEN Water Pollution Control Authority

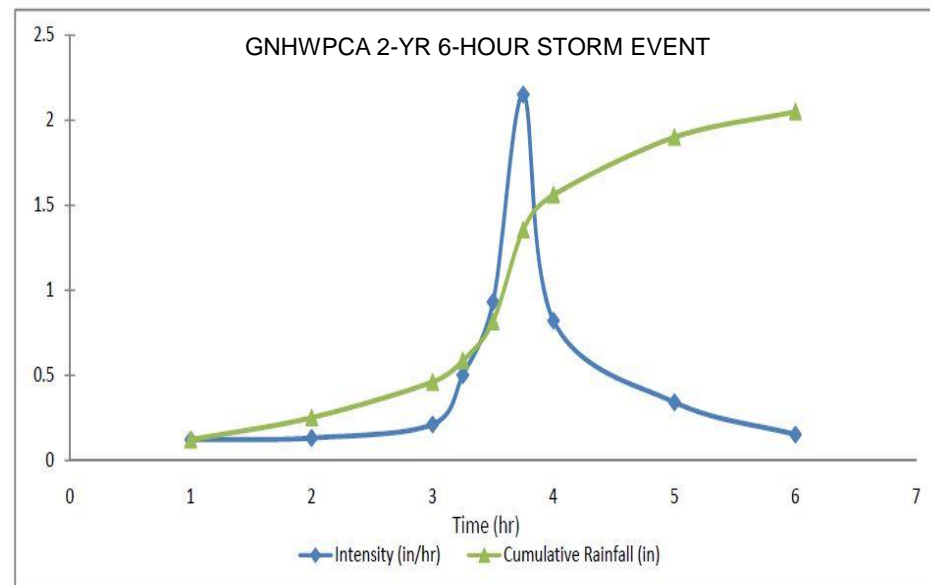
JUNE 2008

Revised September 2010

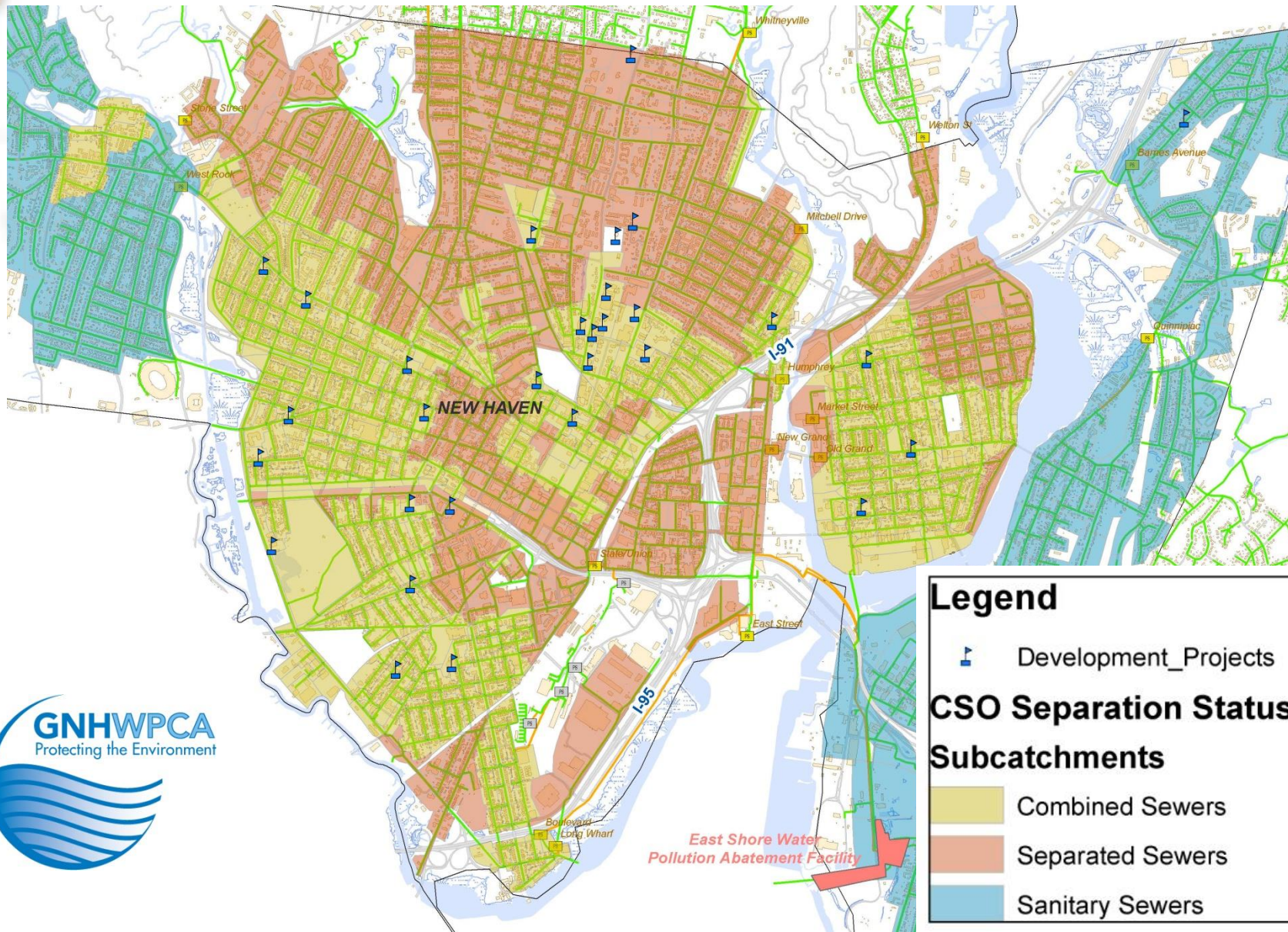


GREEN REDEVELOPMENT PROJECTS

- 💧 **30 individual projects**
- 💧 **50 acres of combined sewer area separated**
- 💧 **Technologies employed to detain the 2 year 6 hour design storm (2.05 inches of rain)**
 - Infiltrators and drywells (over 1 MG)
 - Rain water storage tanks
 - Bioswales and tree wells
 - Water features



GREEN REDEVELOPMENT PROJECT LOCATION MAP (2008 to Present)



CSO REDUCTION RESULTING FROM GREEN REDEVELOPMENT PROJECTS

- **Estimated reduction in CSOs achieved via construction of green redevelopment projects (-2.2%)**
 - 7 CSO events per year
 - 3.3 MG CSO volume per year





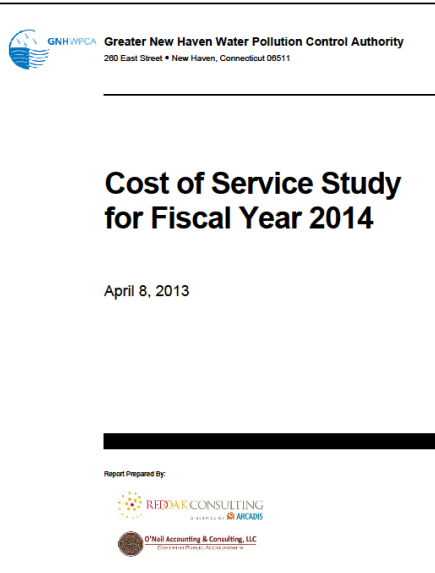
GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

WWW.GNHWPCA.COM

BUDGETS & CIP

FY2014

COST OF SERVICE & CAPITAL IMPROVEMENT PLAN





GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

COST OF SERVICE STUDY EXCERPT
RED OAK CONSULTING APRIL 2014

FY 2014 COST OF SERVICE

O&M – \$ 25,097,540

DEBT SERVICE – \$ 10,441,363

TOTAL COST OF SERVICES – \$ 35,538,903

FY2012 BILLING RATES

SEWER USER CHARGE = 3.55 CCF

QUARTERLY ADMIN. CHARGE = \$13.00

MINIMUM QUARTERLY CHARGE = \$ 66.25 FOR 15 CCF

Exhibit 1
Revenue Requirement and Recommended User Rates
For the fiscal year ended June 30, 2014
With Estimated Revenue Requirements and User Rates for Fiscal Years 2015 through 2018

Line No.	Description	1	2	3	4	5	6	7	8
		FY14	% ch.	FY15	% ch.	FY16	% ch.	FY17	% ch.
A. OPERATIONS & MAINTENANCE									
1	Personnel	\$ 4,811,200	0%	\$ 5,066,000	5%	\$ 5,318,000	5%	\$ 5,597,000	5%
2	Utilities	4,082,650	2%	4,165,000	2%	4,248,000	2%	4,333,000	2%
3	Contracted Operations - Collection System	6,545,500	0%	7,088,000	8%	7,493,000	3%	7,718,000	3%
4	Contracted Sludge & Ash Disposal	4,664,600	0%	4,620,000	-1%	5,175,000	12%	5,434,000	5%
5	Other Contracted Services	3,097,300	3%	3,706,000	20%	3,812,000	3%	4,027,000	6%
6	Payments In-Lieu of Taxes (PILOT)	748,700	0%	750,000	0%	750,000	0%	750,000	0%
7	Equipment, Vehicles & Supplies	218,600	2%	224,000	2%	231,000	3%	238,000	3%
8	Contingency	400,000	0%	400,000	0%	400,000	0%	400,000	0%
9	Total Operations & Maintenance Cost	25,097,540	0%	26,296,000	4%	27,434,000	4%	28,397,000	3%
B. DEBT SERVICE									
Revenue Bonds:									
10	Principal	2,717,687	4%	2,821,687	4%	2,926,687	4%	3,032,687	4%
11	Interest	5,110,668	-2%	5,011,387	-2%	5,033,870	0%	5,400,053	7%
Clean Water Fund Notes:									
12	Principal	3,188,550	-2%	2,763,958	-13%	3,182,854	14%	3,511,000	10%
13	Interest	625,139	7%	667,225	7%	695,648	4%	725,048	4%
CWF Notes - New Haven Reimbursement:									
14	Principal	(1,008,641)	-2%	(982,911)	3%	(1,058,371)	-5%	(886,207)	16%
15	Interest	(134,911)	0%	(210,232)	-55%	(222,045)	-5%	(213,845)	-4%
16	Total Debt Service	10,441,363	-2%	10,181,683	-2%	11,181,052	10%	14,178,738	26%
17	TOTAL COST OF SERVICES	\$ 35,538,903	0%	\$ 36,477,683	3%	\$ 38,615,052	6%	\$ 42,575,738	10%
C. MISCELLANEOUS REVENUES									
18	Interest & Loan Fees	(1,280,000)	0%	(1,280,000)	0%	(1,280,000)	0%	(1,280,000)	0%
19	Aged Accounts Receivable	(3,000,000)	0%	(3,000,000)	0%	(3,000,000)	0%	(3,000,000)	0%
20	Investment Income	(275,000)	0%	(275,000)	0%	(275,000)	0%	(275,000)	0%
21	High Strength Surcharges	(800,000)	0%	(800,000)	0%	(800,000)	0%	(800,000)	0%
22	Grease Disposal	(285,000)	0%	(285,000)	0%	(285,000)	0%	(285,000)	0%
23	Outside Storage	(1,000,000)	0%	(1,000,000)	0%	(1,000,000)	0%	(1,000,000)	0%
24	Interface Fees	(50,000)	0%	(50,000)	0%	(50,000)	0%	(50,000)	0%
25	Reimbursements - OMI/Synagro	(800,000)	0%	(800,000)	0%	(800,000)	0%	(800,000)	0%
26	Other Revenues	(840,000)	0%	(840,000)	0%	(840,000)	0%	(840,000)	0%
27	Total Miscellaneous Revenues	(7,830,000)	0%	(7,830,000)	0%	(7,830,000)	0%	(7,830,000)	0%
D. SOURCE(S) OF RESERVES									
28	Debt Service Coverage Requirement	1,747,000	0%	1,694,000	-3%	1,696,000	0%	2,332,000	40%
29	Debt Service Sinking Fund	-	0%	750,000	0%	450,000	0%	(1,200,000)	-100%
30	Total Source(s) of Reserve Funds	1,747,000	0%	2,444,000	40%	2,146,000	0%	1,132,000	-35%
31	NET REVENUE REQUIREMENT	\$ 29,365,940	0%	\$ 30,893,683	5%	\$ 32,971,052	6%	\$ 35,712,738	8%
32	E. RECEIVABLE MANAGEMENT COSTS	3,885,000	0%	4,086,000	5%	4,332,000	6%	4,673,000	8%
33	Estimated collection rate	89%	0%	89%	0%	89%	0%	89%	0%
34	REVENUE REQUIREMENT	\$ 33,250,940	0%	\$ 35,081,683	5%	\$ 37,303,052	6%	\$ 40,385,738	8%
35	Debt Service Coverage Ratio	1.15	0%	1.15	0%	1.15	0%	1.15	0%
36	Consumption	8,850,000	0%	8,850,000	0%	8,850,000	0%	8,850,000	0%
37	Number of bills	192,000	0%	192,000	0%	192,000	0%	192,000	0%
38	Administrative fee	13.00	0%	13.00	0%	13.00	0%	13.00	0%
39	CCF Rate	3.55	0%	3.55	0%	3.55	0%	3.55	0%



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CAPITAL IMPROVEMENT PLAN
FY 2014 THROUGH FY 2019

CSO LTCP – \$ 85,000,000

COLLECTION SYSTEMS – \$ 34,000,000

TOTAL CIP – \$ 117,000,000

ASSET MANAGEMENT

GNHWPCA PROPOSED PUMP STATION CANDIDATE HIERARCHY (SMALL AND MEDIUM PUMP STATIONS ONLY)

PUMP STATIONS

PUMP STATION PRIORITY LIST	YEAR OF LAST MAJOR UPGRADE	GENERATOR	PROJECTED BUDGET YEAR (FY) FOR UPGRADE	PHYSICAL ADDRESS	DESCRIPTION OF WORK	ESTIMATED COST (year 2013)
Whitneyville, Hamden	1947	Y	2014	911 Whitney Ave	Total renovation of station with new generator	\$700,000
Arch Street, Hamden	(doors / Windows 2010)	Y	2015	169 Arch St	Mechanical Renovation, new generator	\$250,000
Humphrey St, NH	1968	N	2016	145 Humphrey St	Convert to submersible with new gen. hook-up, close CSO	\$125,000
Mitchell Drive, NH	1956	N	2016	125 Mitchell Drive	Convert to submersible with new gen. hook-up, close CSO	\$125,000
Upper Thompon, EH	1982	N	2016	986 Thompson St	Install Generator (new pumps through maintenace budget)	\$100,000
Cosey Beach, EH	1978	Y	2015/2016	25 Cosey Beach Avenue	Pending FEMA Grant Application - Floodproofing, renovation with generator	\$932,000
Fairview, EH	1982	Y	2015/2016	75 Fairview Road	Pending FEMA Grant Application - Floodproofing, renovation with generator	\$966,000
Meadow St, EH	1977	Y	2015/2016	79 Meadow Street	Pending FEMA Grant Application - Floodproofing, renovation with generator	\$771,000
Minor Road, EH	1977	Y	2015/2016	1 Beach Street	Pending FEMA Grant Application - Floodproofing, renovation with generator	\$696,000
Fort Hale, NH	1972	N	2015/2016	25 Woodard Avenue	Pending FEMA Grant Application - Floodproofing, renovation with generator	\$575,000
Long Wharf	1998	N	2017	17 Sea Street	Future Flood Mitigation FEMA Grant Application - Possible relocation	\$1,000,000
Market St, NH	1981	N	2017	135 Market St	New Electrical panel, pumps and valve pit	\$150,000
West Rock Avenue, NH	1971	N	2017	355 West Rock Ave	New Electrical panel, pumps and valve pit	\$150,000
Lovell St, Hamden	1946	N	2018	2586 State St	Convert to submersible station	\$125,000
New Grand Avenue, NH	1941	N	2018	535 Grand Ave	Possibly eliminate in favor of local grinder pumps	-
Putnam Avenue, Hamden	1938	N	2019	449 Putnam Ave	Possible relocation if property becomes available	\$400,000
Stone St, NH	1985	N	2019	19 Stone St	New Pumps and Rails, Maintenace Budget	\$40,000
Main St, EH	1979	N	PENDING DOT	11 Main St	Pending DOT Project - New Cabinet, new pumps	\$80,000
Woodbridge, Woodbridge	1970		2020	66 Ansonia Rd	Renovation, install bypass	\$400,000
COMPLETED PROJECTS SINCE REGIONALIZATION						<i>Actual Cost</i>
Welton St, Hamden	2005	Y		151 Welton St	Total replacement of station with new generator	\$600,000.00
Barnes Avenue, NH	2005	Y		345 Middletown Ave	Total replacement of station with new generator	\$800,000.00
Quinnipiac Avenue, NH	2005	Y		1040 Quinnipiac Ave	Total replacement of station with new generator	\$800,000.00
Old Chauncey Road, Hamden	2010	Y		191 Old Chauncey Rd	New wetwell, pump, panel and generator	\$355,000.00
State St, Hamden	2012	Y		2141 State St	Total renovation of station with new generator	\$550,000.00
Mill Rock, Hamden	2013	Y		340 Mill Rock Rd	Total renovation of station with new generator	\$436,000.00
Old Grand Avenue	2013	Y		441 Grand Ave	New electrical panel with portable gen. hook-up and pumps	\$65,000.00
Morris Cove, NH	2014	Y		1217 Dean St	New Pumps and Bar Rack	\$1,067,200.00

ASSET MANAGEMENT

LINING REHABILITATION

GNHWPCA Proposed CIPP Lining Candidates

* Additional CCTV inspections will be required to confirm lengths.

STREET	FROM MANHOLE	TO MANHOLE	PIPE SIZE (in)	YEAR BUILT	PIPE MATERIAL	LENGTH (ft)	ESTIMATED COST
George Street	NUN03M0455	NUN03M0521	25X37 (31)	1873	BRICK	418	\$ 64,790.00
George Street	NUN03M0455	NUN03M0521	30X45 (38)	1872	BRICK	542	\$ 102,980.00
George Street	NUN03M0455	NUN03M0521	36X48 (42)	1861	BRICK	1960	\$ 411,600.00
Elm Street	NUN01M0337	NUN01M0338	15	1880	VCP	42	\$ 3,150.00
Elm Street	NUN01M0339	NUN01M0338	15	1880	VCP	48	\$ 3,600.00
Park Street	NUN01M0338	NUN03M0475	20X30 (25)	1870	Brick	1034	\$ 129,250.00
Park Street	NUN03M0475	NUN03M0523	25X37 (31)	1870	Brick	771	\$ 119,505.00
Park Street	NUN03M0545	NUN03M0523	15	1884	TILE	40	\$ 3,000.00
Whalley Avenue	NUN01M0414	NUN01M0417	12	1875	VCP	473	\$ 28,380.00
Pearl Street	NHU10M0638	NHU10M0653	30X45 (38)	1872	Brick	1079	\$ 205,010.00
Lawrence Street	NHU06M0288	NHU06M0271	20X30 (25)	1884	Brick	434	\$ 54,250.00
Artizan Street	NEA02M0036	NEA02M0021	12	1873	VCP	565	\$ 33,900.00
Farren Avenue	NQL04M0436	NQL04M0438	12		RCP	917	\$ 55,020.00
Farren Avenue	NQL04M0438	NQL04M0389	15		RCP	527	\$ 39,525.00
Farren Avenue	NQL04M0389	NQL04M0559	18		Cement	851	\$ 76,590.00
Curtiss Drive	NWR04M0502	NWR04M0168	12	1947	VCP	1287	\$ 77,220.00
Curtiss Drive	NWR04M0502	NWR04M0123	12	1947	VCP	679	\$ 40,740.00
S. Frontage Road	NUN03M0044	NUN05M0773	30		RCP	922	\$ 138,300.00
Crescent Drive	NBU02M0864	NBU02M0536	18	1976	RCP	2407	\$ 216,630.00
Crescent Drive	NBU02M0736	NBU02M0525	12	1931	TILE	990	\$ 59,400.00
Crescent Drive	NBU02M0525	NBU02M0534	15	1931	TILE	1270	\$ 95,250.00
Fitch Street	NBU02M0534	NBU02M0536	18	1931	TILE	250	\$ 22,500.00
DeepWood Drive	HML07M0612	HML06M0549	8	1926	VCP	2195	\$ 87,800.00
Webster Street	NHU08M1108	NHU08M1150	15	1890	TILE	732	\$ 54,900.00
Webster Street	NHU08M1150	NHU08M1224	18	1890	TILE	331	\$ 29,790.00
Yok Street	NUN03M0485	NUN03M0526	20X30 (25)	1869	BRICK	938	\$ 117,250.00
Derby Avenue	NBU10M1055	NBU12M1022	48	1872	BRICK	1744	\$ 418,560.00
CHAPEL/DERBY	NBU11M1145	NBU10M1055	30X45 (38)	1872	BRICK	1256	\$ 238,640.00
							\$ -
							\$ -
						20764	
						TOTAL	\$ 2,927,530.00
						COMPLETED 2013 =	\$ 1,264,275.00

✓ CMOM PROGRAM

✓ LIST OF SEWER TO BE REHABILITATED

✓ SSR 2012-03 COLLECTION SYSTEM ASSESSMENT AND REHABILITATION PROJECT (typical)



Greater New Haven Water Pollution Control Authority
Protecting the Environment

PROJECT: 2012 COLLECTION SYSTEM ASSESSMENT AND REHABILITATION –
PARK STREET/DOWNTOWN NEW HAVEN

PROJECT NUMBER: SSR 2012-03

BID OPENING: 10:00 A.M.
Thursday
August 30, 2012



GREATER NEW HAVEN
WATER POLLUTION CONTROL AUTHORITY
260 EAST STREET
NEW HAVEN, CT 06511
PHONE: 203.466.5280 FAX: 203.772.2027
WEB: WWW.GNHWPCA.COM
EMAIL: ENGINEERING@GNHWPCA.COM

EMERGENCY NUMBER: 203-466-5260

ASSET MANAGEMENT

FACILITIES (FY13 EXCERPT)

Greater New Haven Water Pollution Control Authority Capital Plan - Priority Schedule

Funded Capital Projects

Oper - Operating Fund

Rev - Revenue Bonds

CWF - Clean Water Funds

DIRF - Dedicated Infrastructure Renewal Fund

Ref. No.	PROJECT TYPE	PROJECT NAME	DESCRIPTION	Requesting Dept.	ESTIMATED COSTS	Approved/ Funded	Funding Year	FUNDING SOURCE	Criticality	Condition Assessment	PROJECT PRIORITY	ESTIMATED Finish
1	Miscellaneous	Cathodic Protection Plan	(\$150k budgeted in Eng. Budget) Fix Rectifiers/Test/Fucci/CP	Eng	\$ 25,000	01.1300.5694	FY 13/14	Oper				
2	Pump Stations	Truman Tank - Passive Carbon Vent	Received Dual Scope & drawing of system from Met-Pro Environmental (Quoted Price Nov. 2012 \$42,350)	Ops	\$ 42,350	01-1400-5690	FY 13/14	Oper				
3	260 East Street	260 East Street Gate Proposal	Received Proposal for Gate & option of fencing from Grasshopper Lawns (Quoted Price Nov. 2012 \$7,773)	Admin	\$ 7,773	01-1400-5690	FY12/13	Oper				
4	Pump Stations	Odor Control Equipment for Morris Cove	Received Proposal from Monashell (Quoted Price July 2012 \$7,500)	Ops	\$ 7,500	01-1400-5690	FY 13/14	Oper				
5	Miscellaneous	6" Trailer Mounted Pump	Received Quote from Thompson Pump (Quoted Price Nov. 2012 \$56,795)	Ops	\$ 56,795	01-1400-5690	FY 13/14	Oper				
6	Clean Water Fund - Planning Grant-Local Share	Grant Paradise Ave Sewer Relocation	Planning Grant Paradise Ave Sewer Relocation Evaluation, Hamden (55/45) - Engineering only	ENG	\$ 100,000	02-	FY 13/14	DIRF				
7	Collections: Repair and Replacement	Manhole Rehab	Manhole Rehab (similar to lining project)	ENG	\$ 150,000	02-	FY 13/14	DIRF				
8	Pump Stations	Arch Street Pump Station, Hamden	Design Arch Street Pump Station, Hamden	ENG	\$ 50,000	02-	FY 13/14	DIRF				
9	260 East Street	UPS System for 260 East Street	UPS System for 260 East Street	IT/Eng	\$ 50,000	13-7550	FY 12/13	Revenue				
10	Collections: Repair and Replacement	<u>Lining Rehab</u>	Ongoing (see separate xls sheet)	Eng	\$ 851,000	13-7557	FY12/13	Revenue			1	
11	Collections: Repair and Replacement	Collection System Assessment & Rehab	Collection System Assessment & Rehab- additional Lining	ENG	\$ 749,000	13-7557	FY 12/13	Revenue				
12	I&I: Clean Water Fund	Collections System I&I Planning Projects	I&I SSES - East Haven Areas 5,9&13, Hamden Middle Thorpe Drive Area	Eng	\$ 368,000	02-7528	FY12/13	DIRF			1	649-PG
13	Collections	Emergency On-Call Repair		Eng	\$ 1,100,000	13-7508	FY12/13	Revenue				
14	Collections	Right of Way Clearing		Ops	\$ 99,000	01-1400-5694	annual	Oper	only \$50,000 approved per year		2	
15	Plant - Inc	New Boiler, Retube Boiler	Waste Heat Boiler Rehabilitation	Ops	\$ 1,500,000	02-7525 and 13-7525	FY12/13	DIRF/Rev			1	May - In Progress
16	Plant - Primary	Primary Basin Scum	\$56k per Basin	Ops	\$ 168,000	02-	FY 13/14	DIRF			4	
17	Pump Stations	Morris Cove (Replace all Pumps)	In Design	Ops	\$ 1,000,000	13-7552	FY 12/13	Revenue			1	Bid May 13 Complete 6/14
18	Pump Stations	Mill Rock Pump Station Rehab	Construction \$435,000	Ops	\$ 500,000	13-7553	FY 12/13	Revenue			1	Complete 5/13
19	Pump Stations	Develop O&M Manuals lift stations (all new regional stations)	Modify ERP Plan to include	Eng	\$ 50,000	01.1300.5685	2013	Oper			3	June - In Progress
20	Pump Stations	Old Grand PS Electrical Relocation & Upgrade (Includes Design)		Ops	\$ 100,000	13-7555	FY 12/13	Revenue			1	In Design - Spring 2013 Bid
21	Pump Stations	Quinnipiac/Barnes Pump Replacements - HOMA PUMP	4 Pumps Total - 2 in place, & 2 @ \$22k each	Ops	\$ 25,000	Feb-23	2012+13	OPS			2	
22	Pump Stations	Whitneyville Pump Station Rehab	Rehabilitation of Whitneyville Pump Station, New Pumps, Electrical, Generator and Cosmetic	Ops	\$ 650,000	13-7554	FY 12/13	Revenue			2	Design - Sum13 2014 Bid



PROJECT PRODUCTION

NUMBER OF LINEAR FEET REPLACED = 42,000

NUMBER OF LINEAR FEET LINED = 58,000

CONSTRUCTION COST SINCE 2006 = \$ 82,579,417

GIS ESRI APPLICATION



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